

## **REMARKS**

The Office Action dated June 15, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

By this Response, claims 2 and 3 have been amended to more particularly point out and distinctly claim the subject matter of the present invention. Claims 5-6 and 12-13 were previously canceled without prejudice or disclaimer. Support for the above amendments is provided in the Specification on at least paragraph [0028] to paragraph [0031]. Accordingly, claims 1-4 and 7-11 are currently pending in the application, of which claims 1 and 7 are independent claims.

Applicant appreciates the Office re-opening prosecution in view of Applicant's Pre-Appeal Brief filed on March 2, 2007.

In view of the above amendments and the following remarks, Applicant respectfully requests reconsideration and timely withdrawal of the pending rejections to the claims for the reasons discussed below.

### ***Claim Rejections under 35 U.S.C. §103(a)***

#### **Claims 1, 7, and 8**

The Office Action rejected claims 1, 7, and 8 under 35 U.S.C. §103(a) as allegedly unpatentable as obvious over Darabi, *et al.* (U.S. Patent Publication No. 2002/0094037)

(“Darabi”) in view of Sawyer, *et al.* (U.S. Patent No. 5,307,372) (“Sawyer”). The Office Action alleged that Darabi discloses or suggests every claim feature with the exception of “wherein the filtering, measuring and adjusting is repeated until a compromise between DC offset rejection and image rejection is achieved, and wherein the compromise is reached when the DC offset rejection is within acceptable tolerances and image rejection meets minimum pre-specified requirements” as recited in claim 1, and similarly in claim 7. The Office Action cited Sawyer to cure the deficiencies of Darabi. Applicants respectfully traverse these rejections for at least the following reasons.

Claim 1, upon which claims 2-4 are dependent, recites a method. The method includes filtering a signal with a bandpass filter, measuring image rejection and DC offset rejection of the filtered signal, and adjusting a center frequency of the bandpass filter. The filtering, measuring and adjusting is repeated until a compromise between DC offset rejection and image rejection is achieved. The compromise is reached when the DC offset rejection is within acceptable tolerances and image rejection meets minimum pre-specified requirements.

Claim 7 recites a system. The system includes means for filtering a signal, means for measuring image rejection and DC offset rejection of the filtered signal, and means for adjusting a center frequency of the means for filtering. The filtering, measuring and adjusting is repeated until a compromise between DC offset rejection and image rejection is achieved. The compromise is reached when the DC offset rejection is within acceptable tolerances and image rejection meets minimum pre-specified requirements.

Claim 8, upon which claims 9-11 are dependent, recites a system. The system includes a bandpass filter capable of filtering a received signal and capable of having a center frequency adjusted, and at least one measurement circuit, communicatively coupled to the filter, capable of measuring image rejection and DC offset rejection of the filtered signal. The bandpass filter and at least one measurement circuit continue to filter, measure, and adjust the center frequency until a compromise between DC offset rejection and image rejection is achieved. The compromise is reached when the DC offset rejection is within acceptable tolerances and image rejection meets minimum pre-specified requirements.

As will be discussed below, Darabi in view of Sawyer fails to disclose or suggest every claim feature recited in claims 1, 7, and 8, and therefore fails to provide the features of the claims discussed above.

Darabi is directed to a low-power and high-performance receiving including an IF demodulator for high data rate, frequency modulated systems, such as Bluetooth. The IF demodulator is implemented in an analog domain for simplicity and lower power consumption and operates at an IF frequency. (Darabi, Abstract; page 1, paragraphs [0008] to [0010])

Sawyer is directed to an apparatus for transmitting and receiving packets of data among a multitude of base and remote units utilizing a frequency hopping technique. The apparatus uses a single clock source for synchronizing the analog signal processing circuit, the modular encoder and the microprocessor, and uses an inexpensive

microprocessor with a serial peripheral interface. (Sawyer, Abstract; col. 3, line 27 to col. 4, line 10)

Assuming *arguendo* that the teachings of Darabi could be combined with the teachings of Sawyer, the combination of Darabi and Sawyer fails to disclose or suggest every claim feature recited in claim 1, and similarly in claims 7 and 8. Specifically, Darabi in view of Sawyer fails to disclose or suggest at least “measuring image rejection and DC offset rejection of the filtered signal” as recited in claim 1, and similarly in claims 7 and 8.

The Office Action asserted that Darabi discloses the aforementioned claim feature, citing paragraph [0003]. Rather, Darabi discloses a channel selector filter 16 which selects a desired channel of frequency, e.g. a 2 MHz channel. The channel selector filter 16 is essentially a bandpass filter that passes through the selected frequency and rejects the other frequencies. (Darabi, paragraph [0021]) Further, Darabi, at paragraph [0003], merely discloses that a Bluetooth receiver may have a 2 MHz intermediate frequency, causing an image signal to be within a 80 MHz ISM band. An image reject requirement is relaxed, and may be achieved by an on-chip complex-domain bandpass filter (BPF). Once a desired channel is selected, a limiter amplifies the signal to a well-defined level, and the received signal strength is indicated. (Darabi, paragraph [0003])

Thus, Darabi fails to disclose or suggest “measuring image rejection and DC offset rejection of the filtered signal.” Hence, Darabi fails to disclose or suggest that image rejection and DC offset of the signal filtered by channel selector filter 16 is measured.

Accordingly, Darabi fails to disclose or suggest every claim feature recited in claims 1, and similarly in claims 7 and 8. Sawyer fails to cure the deficiencies of Darabi with respect to the aforementioned claim features.

Therefore, Applicants respectfully request withdrawal of the rejection of claims 1, 7, and 8 under 35 U.S.C. §103(a), and respectfully submit that claims 1, 7, and 8, and the claims that depend therefrom, and now in condition for allowance.

#### Claims 2-4 and 9-11

The Office Action rejected claims 2-4 and 9-11 under 35 U.S.C. §103(a) as allegedly unpatentable as obvious over Darabi in view of Sawyer, and further in view of Vinn, *et al.* (U.S. Patent No. 6,441,682). The Office Action alleged that Darabi in view of Sawyer discloses or suggests every claim feature recited in claims 1 and 8 with the exception of “wherein the bandpass filter comprises two cross-coupled low pass filters, wherein the cross-coupling includes cross-coupled variable resistors, and wherein the adjusting is done by varying the resistance of the cross-coupled variable resistors” as recited in claims 2-4 and 9-11. The Office Action cited Vinn to cure the deficiencies of Darabi.

As will be discussed below, Darabi in view of Sawyer, and further in view of Vinn, fails to disclose or suggest every claim feature recited in claims 2-4 and 9-11, and therefore fails to provide the features of the claims discussed above.

Darabi and Sawyer were discussed above. Vinn is directed to an active RC polyphase band-pass filter with a transconductor cross-coupling between filter sections. (Vinn, Abstract; col. 7, line 38 to col. 8, line 54) As noted above, Darabi in view of Sawyer fails to disclose or suggest every claim feature recited in claims 1 and 8. Specifically, Darabi in view of Sawyer fails to disclose or suggest at least “measuring image rejection and DC offset rejection of the filtered signal.” Vinn fails to cure the deficiencies of Darabi and Sawyer with respect to the aforementioned claim features. Accordingly, Darabi in view of Sawyer, and further in view of Vinn, fails to disclose or suggest every claim feature recited in claims 1 and 8.

Claim 2-4 depends from claim 1. Claims 9-11 depend from claim 8. Accordingly, claims 2-4 and 9-11 should be allowable for at least their dependency upon an allowable base claim, and for the limitations recited therein.

Therefore, Applicants respectfully request withdrawal of the rejection of claims 2-4 and 9-11 under 35 U.S.C. §103(a), and respectfully submit that claims 1, 7, and 8, and the claims that depend therefrom, and now in condition for allowance.


### CONCLUSION

In conclusion, Applicants respectfully submit that Darabi, Sawyer, and Vinn fail to disclose or suggest every claim feature recited in claims 1-4 and 7-11. The distinctions previously noted are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-4 and 7-11 be allowed, and this present application passed to issuance.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

  
Brad Y. Chin  
Registration No. 52,738

**Customer No. 32294**  
SQUIRE, SANDERS & DEMPSEY LLP  
14<sup>TH</sup> Floor  
8000 Towers Crescent Drive  
Tysons Corner, Virginia 22182-2700  
Telephone: 703-720-7800  
Fax: 703-720-7802

BYC:ksh